

## Message Text

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ACTION SS-25

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S E C R E T GENEVA 03317

EXDIS USCTB

PASS TO DOE

E.O.11652:XGDS-3  
TAGS: PARM US UK UR  
SUBJECT: CTB NEGOTIATIONS: ISI TECHNICAL SUBGROUP  
MEETINGS, FEBRUARY 28 AND MARCH 2.  
CTB MESSAGE NO.156

1. SUMMARY: TURNBULL (US) COMPLETED PRESENTATION ON DESIGN OF INTERNAL SEISMIC INSTALLATIONS WITH TECHNICAL DESCRIPTION AND JUSTIFICATION OF ARRAYS. SOFRONOV (USSR) ASKED SEVERAL QUESTIONS, FOCUSSED ON NUMBER OF STATIONS US WANTED AND LEVEL OF DETAIL TO BE INCLUDED IN AGREEMENT. END SUMMARY
2. AT FEB 28 MEETING OF ISI SUBGROUP, TURNBULL PARAPHRASED AND PASSED TO SOVIETS PAPER PROVIDING TECHNICAL DESCRIPTION AND JUSTIFICATION OF SEISMIC ARRAYS AS INTERNAL SEISMIC INSTALLATIONS (TEXT SENT SEPTEL CTB 157 SINCE WE UNDERSTAND WORK IS NOW IN PROCESS IN WASHINGTON ON RELATED PAPER). PAPER DESCRIBED HOW ARRAYS PROVIDE  
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ADDITIONAL TECHNICAL CAPABILITY TO IMPROVE DETECTION AND IDENTIFICATION CAPABILITY AND THEREFORE IMPROVE CONFIDENCE IN TREATY COMPLIANCE. HE SAID THIS COMPLETED US PRESENTATIONS ON DESIGN OF INTERNAL SEISMIC INSTALLATIONS AND CALLED ON SOVIETS TO RESPOND TO US IDEAS.

3. SOFRONOV RESPONDED WITH PRELIMINARY QUESTIONS, ASKING

THAT US EXPLAIN WHAT SIGNAL TO NOISE RATIO AND OVERALL DETECTION CAPABILITY THE US WANTED TO ACHIEVE AT EACH SITE, AND WHAT WOULD JUSTIFY THE USE OF AN ARRAY. HE ALSO ASKED WHAT VOLUME OF DATA WOULD BE TRANSMITTED FROM AN ARRAY, AND WHEN A PROTOTYPE ARRAY WOULD BE COMPLETE. TURNBULL RESPONDED THAT ARRAYS WERE INTENDED TO PROVIDE AN IMPROVEMENT IN SIGNAL TO NOISE RATIO COMPARED TO SINGLE STATIONS, AND EXPLAINED THAT US DID NOT HAVE A PROTOTYPE ARRAY UNDER DEVELOPMENT BUT HAD CONSIDERABLE EXPERIENCE WITH SIMILAR ARRAYS. HE SAID DATA RATE FROM ARRAYS WOULD BE ABOUT 40,000 BITS PER SECOND, INCLUDING ALLOWANCES FOR ERROR CORRECTION AND MEASURES TO ASSURE RELIABLE COMMUNICATIONS.

4. AT MARCH 2 MEETING SOFRONOV PROVIDED LIST OF QUESTIONS PREVIOUSLY ASKED AT FEB 24 (CTB NO.152) AND FEB 28 MEETINGS. TURNBULL RESPONDED TO SOME QUESTIONS, DEFERRING OTHERS. ON FLEXIBILITY OF AGREEMENT LANGUAGE RELATED TO ISIS, TURNBULL SAID LANGUAGE DID NOT REQUIRE EQUIPMENT OF US DESIGN BUT THAT THE ESSENTIAL CHARACTERISTICS OF ISIS SHOULD BE SPECIFIED IN ADVANCE. WITH REGARD TO ON SITE SELECTION, SOFRONOV SUGGESTED THAT EACH SIDE WAS COMPETENT TO DO NOISE SURVEYS FOR ITS SITES AND PROVIDE THEM TO THE OTHER SIDE. US DEL FELT PROCEDURES SUGGESTED IN ILLUSTRATIVE LANGUAGE WERE APPROPRIATE AND REASONABLE, BUT WOULD BE WILLING TO CONSIDER SITING  
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ISIS ON BASIS OF AVAILABLE NOISE DATA. POSSIBILITY OF MOVING INSTALLATION IF SITE WAS FOUND UNSUITABLE WOULD HAVE TO BE PROVIDED FOR. ON NUMBER OF INTERNAL INSTALLATIONS, TURNBULL SAID IT WAS IN INTEREST OF BOTH SIDES TO ACHIEVE AS HIGH A CAPABILITY AS WAS REASONABLY ATTAINABLE. WE COULD NOT SET ARBITRARY OR OVERLY PRECISE GOALS. HE SUGGESTED THAT AGREEMENT FIRST BE REACHED ON SITING PROCEDURES AND TYPE OF INSTRUMENTATION TO BE DEPLOYED. THE PARTICIPANTS COULD THEN JOINTLY WORK OUT WHERE STATIONS SHOULD BE DEPLOYED TO PRODUCE REASONABLE AND EFFECTIVE SYSTEM TO INCREASE CONFIDENCE.

5. IN RESPONDING TO US ANSWERS, SOFRONOV URGED THAT THE AGREEMENT ITSELF NEED NOT SPECIFY TECHNICAL DETAILS, BUT SHOULD DESCRIBE ONLY THOSE ELEMENTS NECESSARY TO CHARACTERIZE REQUIREMENTS FOR ISI, MENTIONING AUTHENTICATION AND DATA TRANSMISSION AS ASPECTS THAT SHOULD BE INCLUDED. HE COMPLAINED THAT US DEL LANGUAGE DID ENVISION USE OF US EQUIPMENT (MENTIONING SPECIFICATION OF INTELSAT AS AN EXAMPLE) AND SAID THAT SOVIETS MIGHT WANT TO PROVIDE INFORMATION ON THEIR OWN EXPERIENCE AT A LATER DATE. ON NUMBERS OF ISIS, HE SAID US ANSWER

SADDENED HIM AND ASKED WHETHER US WOULD ACCEPT STATIONS  
AT THE FIVE SOVIET SITES PROPOSED FOR THE CCD DATA  
EXCHANGE. US DEL REPLIED THAT THE QUESTION OF NUMBERS  
AND LOCATIONS SHOULD NOT BE PREJUDGED. THIRLAWAY (UK)  
ASKED WHETHER SOFRONOV WAS SUGGESTING THAT THESE STATIONS  
BE EQUIPPED WITH EQUIPMENT OF A TYPE LIKE THAT SUGGESTED  
BY THE US. SOFRONOV AVOIDED DIRECT ANSWER, SAYING THIS  
WOULD HAVE TO TAKE INTO ACCOUNT US PROPOSALS, CCD  
PROPOSALS, AND RESULTS OF WORK IN THE USSR. WARNKE

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## Message Attributes

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